Subcontracts Management Plan

for the

United States Air Force
Training Systems Acquisition II
(TSA II)

Prepared by:

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1.0 SCOPE

This Subcontracts Management Plan defines procedures in support of the Training Systems Acquisition II (TSA II) program. This plan describes the process BAE SYSTEMS will use to ensure that subcontracts in direct support of the TSA II program are managed, monitored and controlled as required to support successful delivery of TSA II requirements. The Plan includes a description of the existing BAE SYSTEMS Subcontracts Management Process. This document will be updated as the program progresses to document any changes.

2.0 SUBCONTRACTS MANAGEMENT Overview

BAE SYSTEMS Flight Simulation & Training has a government-approved procurement system with established procedures that follow the Federal Acquisition Regulation and use best-practice methods for source selection, subcontract award, and subcontract monitoring. BAE SYSTEMS's system ensures timely delivery of specification-compliant products. Subcontract selection is governed by **BAE SYSTEMS' Purchasing Work Instruction (OSP-MTSP-001).** These procedures establish the criteria for both competitive and non-competitive sourcing. Supporting procedures include those for Supplier Survey, Product Assurance and Quality Auditing, and Pre-Award Supplier Survey.

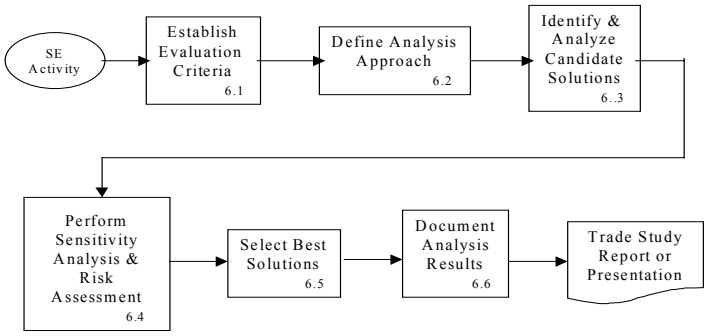
BAE SYSTEMS's consolidated purchasing system is based on a CINCOM-designed, mainframe manufacturing resource planning (MRP) project control system known as RISE. RISE features include control of customer orders; inventory stock control; part, bill of materials, work center and routing files; end item scheduling; material supply planning; material and services procurement; production activity cost management; project material planning; and cost accounting and control. Supplier quality requirements are fed into RISE via the Supplier Quality System. BAE SYSTEMS quality engineers load quality provisions by part before an MRP requisition reaches the procurement stage. Both the Receiving Module and the Accounts Payable Module are attached to the Purchasing Module. This permits total visibility into the acquisition process.

BAE SYSTEMS' Program Management Policy (SIMPROD-PLCY-001) clearly establishes the Subcontracts Manager as a core member of the Program Management Team. As such, the Subcontracts Manager has specific responsibilities for ensuring that program objectives are met. These responsibilities are matched with authority over and accountability for appropriate program schedule, cost and quality goals. The Program Manager has ultimate decision authority and performance responsibility for the total program. However, that authority is governed by the specific responsibility of the Subcontracts Manager to sign commitments affecting cost, schedule and performance. The Subcontracts Manager participates in all discussions with subcontractors regarding cost and schedule issues, and monitors other technical exchanges to insure that those discussions do not expand beyond simple clarification and facilitation.

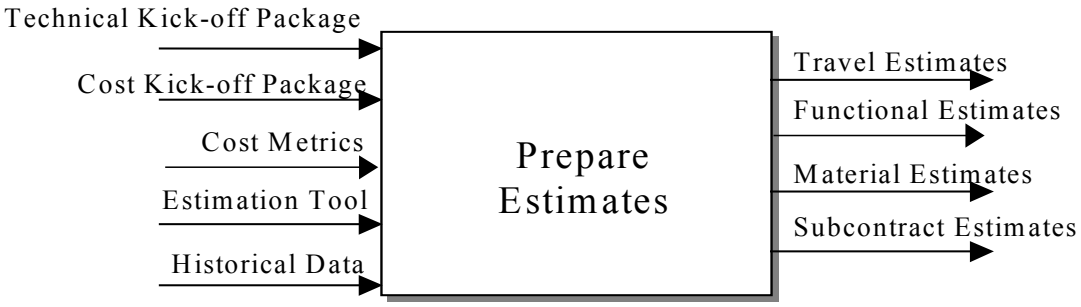
3.0 SUBCONTRACTS SOURCE SELECTION

BAE SYSTEMS' Subcontracts group, together with the Quality Assurance, Purchasing, Engineering and Program Management organizations, conducts source selections and surveillance of subcontractors. By policy, BAE SYSTEMS uses only approved sources of supply. Supplier selection is based on a determination of their capability to meet contractual requirements at an acceptable level of quality cost effectively. Contractual requirements include both customer specifications and BAE SYSTEMS' quality standards. This capability to meet standard will be determined through site surveys by BAE SYSTEMS or will be evidenced by a satisfactory quality and delivery history of the same (or a similar) product. When the requirement for a competitive acquisition is complex and the award is not based on price alone, an internal evaluation team will be used.

A key element in BAE SYSTEMS' establishment of material requirements is a make/buy decision. The first step in this make/buy decision process is the Engineering Analysis and Trade Study Phase described in **BAE SYSTEMS' Engineering Analysis and Trade Study Procedure (FST-PROC-030)** and is depicted below.



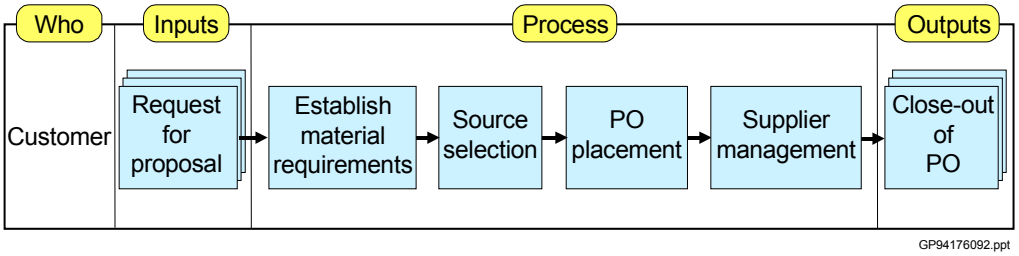
The results of this analysis become part of the Cost Kick-Off Package, which is used in the preparation of estimates. Estimate preparation is described in **BAE SYSTEMS' Proposal Estimation Procedure (FST-PROC-073)** and is depicted below.



The Subcontracts Estimates that result from this process provide the cost and technical basis for source selection of subcontractors. BAE SYSTEMS' source selection process is based on our substantial experience in cost, schedule, quality and risk management. The result of this process is the selection of high performing suppliers.

4.0 SUBCONTRACTS MANAGEMENT

BAE SYSTEMS Subcontracts is responsible for selecting, directing, coordinating, integrating and managing subcontractor efforts. A top-level subcontract management process flow is illustrated in the figure below.

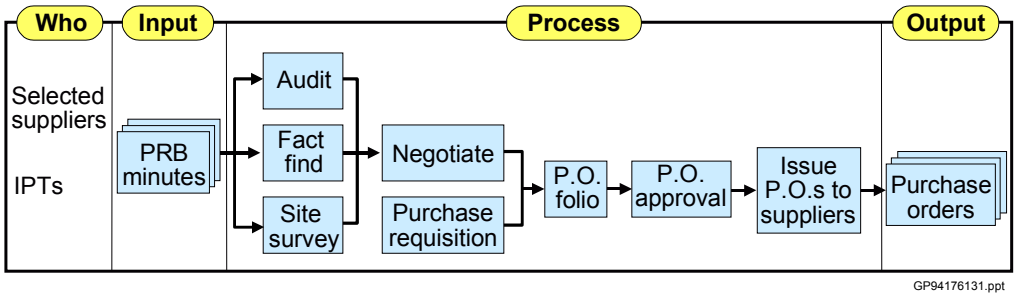


Subcontract Management Process

The purchase order placement process is used to document both business arrangement and technical requirements between the buyer and the suppliers. After the Procurement Review Board (PRB) approval of the source selection, Subcontracts initiates any audits, fact-finding, and negotiations as necessary. Prior to purchase order award, a supporting purchase order and the supporting documentation is completed and submitted for management approvals in accordance with the Procurement Practice.

Prior to release of the purchase order for negotiation, BAE SYSTEMS quality engineers review the requisition, the engineering drawings and specifications, the statement of work, and other pertinent data to classify the purchase in accordance with MIL-STD-1553B quality certifications. Additionally, both the status of source inspection and design stability are verified. This review assures that the description of quality requirements and instructions are accurate and appropriate.

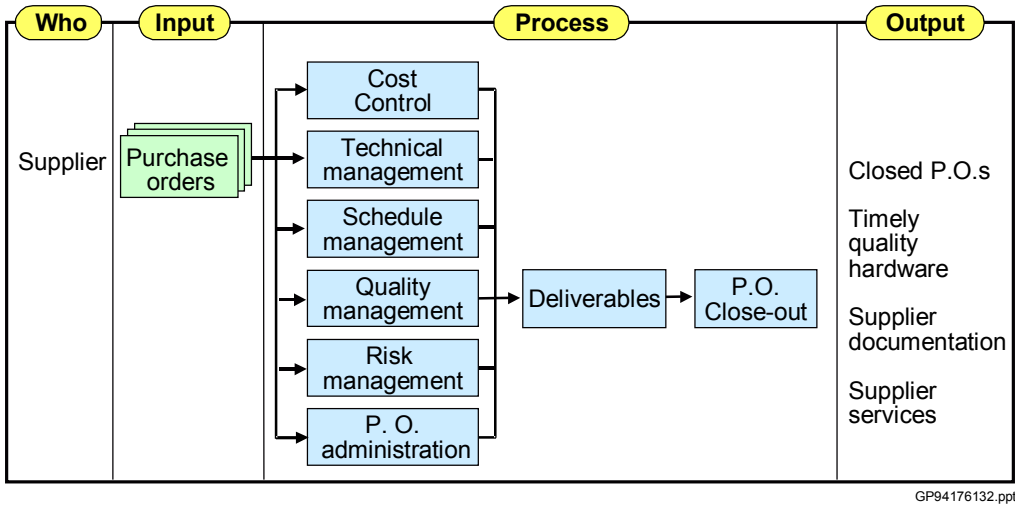
Before placement of orders, the supplier must be approved for the material or service being procured. Approval is based on achieving a minimum quality system rating of 95%. Supplier Quality Procedures and Implementation guidance is provided as part of the BAE SYSTEMS Supplier Quality Program. The Purchase Order Issue Process is depicted below.



Purchase Order Issue Process

The Supplier Management Post Award Process (illustrated below) is used to administer and control the effort of suppliers. The key feature of this process is the proactive participation of Subcontracts

Management in identifying and resolving issues early, before the overall program might be negatively impacted. The post award process identifies the specific methods to be used.



Supplier Management Process

Post award, the Subcontract Manager remains an integral part of the Program Team as established by **BAE SYSTEMS Program Management Policy (SIMPROD-PLCY-001).** The Subcontract Manager works closely with the Team to ensure that subcontractor activities occur according to the contracted schedule and are smoothly integrated with other program work. The Subcontract Manager establishes close working relationships with both vendor technical and business managers to carefully monitor progress. Site visits are made when appropriate. BAE SYSTEMS emphasizes use of earned value methods and specific metrics to track task accomplishment. The Subcontract Manager coordinates deliveries, including special handling and customs clearance, and the in-plant or on-site actions of the subcontractor. The Subcontract Manager is the focal point for controlling all vendor activities related to the program. Cost, technical, schedule and quality issues are identified, tracked and monitored through established reporting and coordination processes. Program risks are assessed and actions taken according to the change management procedure discussed in Section 5.

In addition to integrating subcontractor activities into the overall program, BAE SYSTEMS employs quality-based methods to verify the conformity of subcontractor shipments. The **Source Inspection Procedure (FST-PROC-046)** provides the method for validating vendor Quality Management systems and for approving vendor products. The **Incoming Inspection Procedure (FST-PROC-109)** establishes Quality requirements for shipments arriving at the Tampa facility. In both cases, the quality standards applied will be IAW the specific subcontract requirements. The **Vendor /Supplier Rating & Request for Corrective Action Instruction (QOI-404)** outlines internal processes for establishing an initial vendor quality rating and for updating that rating as required.

All deliverables are processed through a central receiving point IAW the **BAE SYSTEMS Receiving Procedure (FST-PROC-109).** This procedure defines the activities to be performed by the Receiving Department and provides a positive means for identifying the status of all received items and for assuring that the deliverable meets contract requirements.

BAE SYSTEMS maintains a specific policy relating to management of software development contracts (**Software Subcontract Management Procedures FST-PROC-010**). This document focuses on the inter-disciplinary, cross-functional support required to successfully manage software development. The Capability Maturity Model of the Software Engineering Institute provides the basis for this policy.

The **BAE SYSTEMS Data Acquisition & Management Procedure (FST-PROC-025)** establishes a process for validating and accepting data provided as a contract deliverable. To ensure positive control of content, all data received by Contracts or Program Management will be delivered to the Program Data Manager to be logged into the database prior to copying or distribution.

5.0 SUBCONTRACT MANAGEMENT ROLES AND RESPONSIBILITIES

Role	Responsibility
Subcontract Department	The Subcontract Department of the Manufacturing and Materials Management organization shall be responsible for drafting, obtaining approval and updating the subcontract plan throughout the course of a program.
Program Manager	Delineates the tasks to be performed and the data items to be produced.
Engineering	Engineering Management shall designate the appropriate functional engineering support. The designated functional Engineering group shall define the specific technical requirements for the materials and/or services and act as the FST technical representative.
PRODUCT ASSURANCE & SUPPORT	It is the responsibility of Product Assurance & Support to identify the requirements for each product and service to meet our contractual requirements. Performance capability will be assessed to ensure the supplier can meet customer requirements and has a documented quality system. They will ensure that all relevant drawings, specifications, process requirements, inspection criteria or other data shall be provided with the purchase documents forwarded to the supplier/subcontractor.

All decision making authority and accountability for task management and accomplishment under the contract will be vested in the BAE SYSTEMS Program Manager (PM). The PM will have full responsibility for the management, administration and reporting requirements of the contract as well as for interfacing with the USAF.

The Subcontract Manager will support the Program Manager in the development of the requirements to the subcontract supplier and will monitor subcontract performance to ensure tasks, products and delivery items are delivered on time and are compliant with the requirements. Management of the supplier involves the integration of all decisions that will effect the design, management and internal and external material decisions to meet BAE SYSTEMS contractual requirements to deliver the best value to the USAF.

Changes to a subcontract shall be made only with the involvement and agreement of the Program Manager and the responsible Subcontracts Manager. Failure to reach agreement on issues relating to changes of the contractual baseline shall be referred to senior management for resolution. Only the Subcontracts Manager and Procurement personnel may make binding commitments to subcontractors on the part of the company, subject to the requirements of the **BAE SYSTEMS' Management Approvals Policy (CPM-001)**.

If problems arise during subcontract execution, the source is generally program changes. These changes may be planned or unintentional. Regardless, BAE SYSTEMS' policy is resolve problems at the earliest opportunity when cost and impact will be minimized. The key parts of effective problem resolution are correct problem identification such that causes, not symptoms, are addressed and selection of the most appropriate solution.

To facilitate problem identification, BAE SYSTEMS emphasizes the use of Program Baselines, which provide a benchmark for measuring progress towards cost, schedule and performance goals. **BAE SYSTEMS' Program Change Management Procedure (PM-PROC-010)** establishes policies and provides tools for base-lining. This Procedure also establishes specific Change Management processes to ensure that baseline changes are captured accurately and disseminated properly.

The essence of selecting the most appropriate solution is finding the optimum balance among the various risks to program schedule, cost and performance. **BAE SYSTEMS' Risk Management Process Handbook (RSP-031)** provides the tools necessary to identify, analyze, plan, track and control the elements of risk that are part of every program decision.

Using these tools and the talents of a multi-functional program management team, subcontract performance problems can be identified before they create major technical impacts on programs and mitigation action can be taken early when effect on cost and schedule is minimal.

6.0 AGREEMENTS AND SUBCONTRACTS

BAE SYSTEMS North America Flight Simulation and Training concluded a Teaming Agreement with Southwest Research Institute of San Antonio, Texas on 1 March 2001 to collaborate on the Training Systems Acquisition program.

Subcontractor	TSA II Program	Specialties
Southwest Research Institute	C-141 TTS	1) Instructional System Design Expertise and Experience. 2) Courseware Development Expertise and Experience 3) Maintenance Training and Instruction

When our strategy for the TSA II program was developed, we made a conscious decision to NOT form a large team with many proposed subcontractors. We believe this was the correct strategy for several reasons. First of all, we are a "full service" training and simulation company with a substantial degree of expertise in virtually every aspect of the types of task orders we anticipate. We will have the opportunity to reach out and tap the capabilities of all elements of the world's largest simulation and training company. Secondly, we believe that we will best serve the interests of our USAF customers if we reserve selection of subcontractors until we know what the specific requirements of a specific task order are. In this way, we do not commit today to a vendor that may offer outdated technology ten years from now.

As CAE understands TSA II program requirements for SDB participation, the following are our goals for SDB participation by NAIC Major Groups for those Major Groups where we anticipate significant participation: 31-33 Manufacturing -- 5%, 41-43 Wholesale Goods -- 5% and 81 Other Services -- 5%.

7.0 SUBCONTRACTS MANAGEMENT SUCCESS STORIES

BAE SYSTEMS is very proactive in developing and managing suppliers. We assisted one small company, SGB Enterprises, with no-cost loans of specialized test equipment, engineering assistance and program management help. As a direct result, SGB now has both a quality system and a program reporting system that makes them an approved source of supply for cockpit display systems. They are providing conforming display systems on schedule and within budget.

BAE SYSTEMS also works closely with large companies. Deliveries of visual systems for our commercial Airbus A340 project from SEOS are routinely on time and within cost targets.